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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,749	09/22/2006	Zhouxin Zhang	CNIP-F-PCT-US	3020
<div>7590 Daniel J. Hudak Hudak Shunk &amp; Farine 2020 Front Street Suite 307 Cuyahoga Falls, OH 44221</div>			<div>EXAMINER FRIEDHOFFER, MICHAEL A</div>	
			<div>ART UNIT 2833</div>	<div>PAPER NUMBER</div>
			<div>MAIL DATE 06/25/2010</div>	<div>DELIVERY MODE PAPER</div>

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/593,749	<b>Applicant(s)</b> ZHANG, ZHOUXIN	
	<b>Examiner</b> Michael A. Friedhofer	<b>Art Unit</b> 2833	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Lee.

Lee discloses in the figures a contact type sensor of an object consisting of a sponge formed by graphics 11 and sponge 12; and at least one membrane switch SW arranged thereunder.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 2, 3, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee in view of Burgess ('617).

Lee discloses all of the claimed limitations with the exception of the specific structure of the membrane switch.

Burgess teaches a membrane switch for a contact-type sensor of an object including an input film 110; an insulating film 130; and an output film 150. Through holes are arranged in the insulating film which is arranged between the input film and the output film. A conductive film 120 on the input film and a conductive film 140 on the output film each face the insulating film. The input and output films are metal films.

It would have been obvious to one of ordinary skill in the art to apply the teachings of Burgess to Lee to form the membrane switch with the structure of Burgess because the purpose of the switch would not be altered by the structure utilized so long as the switch is still activated by coming into contact with an object in which the Burgess structure provides a minimum of structure required to perform the desired operation.

2. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee as modified by Burgess ('617) as applied to claims 1-3, 8 and 9 above, and further in view of Stanley.

Lee as modified by Burgess teaches all of the claimed limitations with the exception of contacts arranged on the input film and/or output film and located at the through holes nor that the contacts on the output film are spaced apart, separate, exposed printed circuit contacts.

Stanley teaches a contact-type sensor having an input film and output film separated by a spacer in which either a conductive film or contacts are located on the input film and two spaced apart, separate, exposed circuit contacts located on the upper side of the output film corresponding to the through holes.

It would have been obvious to one of ordinary skill in the art to apply the teachings of Stanley to Lee as modified by Burgess to form contacts on the output film and/or input film in which the contacts on the output film are formed by two spaced apart, separate exposed printed circuit contacts because this is for the purpose of being able to differentiate the location of contact on the sensor.

3. Claims 7 and 10-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee as modified by Burgess ('617) and Stanley as applied to claim 1-6, 8, and 9 above, and further in view of Miller.

Lee as modified by Stanley and Burgess teaches all of the claimed limitations with the exception of either the input film or the output film being integral with the sponge.

Miller teaches in the figures a contact-type sensor including foam input and output layers upon which the conductive films are directly attached.

It would have been obvious to one of ordinary skill in the art to apply the teachings of Miller to Lee as modified by Stanley and Burgess to form the conductive film directly on the sponge to form a conductive sponge because this is for the purpose of reducing the number of parts required to form the sensor while still providing proper operation.

### ***Response to Arguments***

4. Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A. Friedhofer whose telephone number is 571-272-1992. The examiner can normally be reached on Mon-Fri 6:00 - 2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Renee Luebke can be reached on 571-272-2009. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael A. Friedhofer  
Primary Examiner  
Art Unit 2833

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